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SEQUENCE LISTING

<110> LIU et al.

<120> M-CSF-SPECIFIC MONOCLONAL ANTIBODY AND USES THEREOF

<130> 21601.003

<140> To be assigned

<141> 2005-01-06

<150> US 60/535,181

<151> 2004-01-07

<150> US 60/576,417

<151> 2004-06-02

<160> 137

<170> PatentIn version 3.3

<210> 1

<211> 1401

<212> DNA

<213> Mus musculus

<400> 1

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tgtactgtca ctgactactc catcaccagt gattacgcct ggaactggat acggcaattc      180
ccaggaata aacttgagtg gatgggggtac ataagctaca gtggtagcac ttcctacaat      240
ccatctctca aaagtcggat ctccatcact cgagacacat ccaagaacca gttcttctctg      300
cagctgaact ctgtgactac tgaggacaca gccacatatt actgtgcatc cttegactat      360
gccacgcca tggattactg gggccaaggg acttcggtca ctgtctcttc cgccaaaaca      420
acagcccat cgggtctatcc actggcccct gtgtgtggag atacaactgg ctctcggtg      480
actctaggat gcctgggtcaa gggttatttc cctgagccag tgaccttgac ctggaactct      540
ggatccctgt ccagtgggtgt gcacaccttc ccagctgtcc tgcagtctga cctctacacc      600
ctcagcagct cagtgactgt aacctcgagc acctggccca gccagtccat cacctgcaat      660
gtggcccacc cggcaagcag caccaagggtg gacaagaaaa ttgagcccag agggcccaca      720
atcaagccct gtcttccatg caaatgccca gcacctaac tcttgggtgg accatccgtc      780
ttcatcttcc ctccaaagat caaggatgta ctcatgatct cctgagccc catagtcaca      840
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aacgtggaag tacacacagc tcagacacaa acccatagag aggattacaa cagtactctc      960
cgggtgggtca gtgccctccc catccagcac caggactgga tgagtggcaa ggagttcaaa     1020
tgcaagggtca acaacaaaga cctcccagcg cccatcgaga gaaccatctc aaaacccaaa     1080

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gggtcagtaa gagctccaca ggtatatgtc ttgcctccac cagaagaaga gatgactaag 1140
aaacaggtca ctctgacctg catggtcaca gacttcatgc ctgaagacat ttacgtggag 1200
tggaccaaca acgggaaaac agagctaaac tacaagaaca ctgaaccagt cctggactct 1260
gatggttctt acttcatgta cagcaagctg agagtggaaa agaagaactg ggtggaaaga 1320
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<210> 2
<211> 447
<212> PRT
<213> Mus musculus

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<400> 2

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Asp Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
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Ser Leu Ser Leu Thr Cys Thr Val Thr Asp Tyr Ser Ile Thr Ser Asp
20 25 30

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Tyr Ala Trp Asn Trp Ile Arg Gln Phe Pro Gly Asn Lys Leu Glu Trp
35 40 45

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Met Gly Tyr Ile Ser Tyr Ser Gly Ser Thr Ser Tyr Asn Pro Ser Leu
50 55 60

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Lys Ser Arg Ile Ser Ile Thr Arg Asp Thr Ser Lys Asn Gln Phe Phe
65 70 75 80

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Leu Gln Leu Asn Ser Val Thr Thr Glu Asp Thr Ala Thr Tyr Tyr Cys
85 90 95

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Ala Ser Phe Asp Tyr Ala His Ala Met Asp Tyr Trp Gly Gln Gly Thr
100 105 110

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Ser Val Thr Val Ser Ser Ala Lys Thr Thr Ala Pro Ser Val Tyr Pro
115 120 125

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Leu Ala Pro Val Cys Gly Asp Thr Thr Gly Ser Ser Val Thr Leu Gly
130 135 140

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Cys Leu Val Lys Gly Tyr Phe Pro Glu Pro Val Thr Leu Thr Trp Asn
145 150 155 160

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Ser Gly Ser Leu Ser Ser Gly Val His Thr Phe Pro Ala Val Leu Gln
165 170 175

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Ser Asp Leu Tyr Thr Leu Ser Ser Ser Val Thr Val Thr Ser Ser Thr
 180 185 190

Trp Pro Ser Gln Ser Ile Thr Cys Asn Val Ala His Pro Ala Ser Ser
 195 200 205

Thr Lys Val Asp Lys Lys Ile Glu Pro Arg Gly Pro Thr Ile Lys Pro
 210 215 220

Cys Pro Pro Cys Lys Cys Pro Ala Pro Asn Leu Leu Gly Gly Pro Ser
 225 230 235 240

Val Phe Ile Phe Pro Pro Lys Ile Lys Asp Val Leu Met Ile Ser Leu
 245 250 255

Ser Pro Ile Val Thr Cys Val Val Val Asp Val Ser Glu Asp Asp Pro
 260 265 270

Asp Val Gln Ile Ser Trp Phe Val Asn Asn Val Glu Val His Thr Ala
 275 280 285

Gln Thr Gln Thr His Arg Glu Asp Tyr Asn Ser Thr Leu Arg Val Val
 290 295 300

Ser Ala Leu Pro Ile Gln His Gln Asp Trp Met Ser Gly Lys Glu Phe
 305 310 315 320

Lys Cys Lys Val Asn Asn Lys Asp Leu Pro Ala Pro Ile Glu Arg Thr
 325 330 335

Ile Ser Lys Pro Lys Gly Ser Val Arg Ala Pro Gln Val Tyr Val Leu
 340 345 350

Pro Pro Pro Glu Glu Glu Met Thr Lys Lys Gln Val Thr Leu Thr Cys
 355 360 365

Met Val Thr Asp Phe Met Pro Glu Asp Ile Tyr Val Glu Trp Thr Asn
 370 375 380

Asn Gly Lys Thr Glu Leu Asn Tyr Lys Asn Thr Glu Pro Val Leu Asp
 385 390 395 400

Ser Asp Gly Ser Tyr Phe Met Tyr Ser Lys Leu Arg Val Glu Lys Lys
 405 410 415

Asn Trp Val Glu Arg Asn Ser Tyr Ser Cys Ser Val Val His Glu Gly
 420 425 430

Leu His Asn His His Thr Thr Lys Ser Phe Ser Arg Thr Pro Gly
 435 440 445

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 <211> 702
 <212> DNA
 <213> Mus musculus

<400> 3
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 ttctcctgca gggccagtc gagcattggc acaagcatac actggtatca gcaaagaaca 180
 aatggttctc caaggcttct cataaagtat gcttctgagt ctatctctgg gatcccttcc 240
 aggttttagtg gcagtggatc agggacagat ttactctta gcatcaacag tgtggagtct 300
 gaagatattg cagattatta ctgtcaacaa attaatagct ggccaaccac gtcggcgagg 360
 gggacaaagt tggaaataaa acgggctgat gctgcaccaa ctgtatccat cttcccacca 420
 tccagtgagc agttaacatc tggaggtgcc tcagtcgtgt gcttcttgaa caacttctac 480
 cccaaagaca tcaatgtcaa gtggaagatt gatggcagtg aacgacaaaa tggcgtcctg 540
 aacagttgga ctgatcagga cagcaaagac agcacctaca gcatgagcag caccctcacg 600
 ttgaccaagg acgagtatga acgacataac agctatacct gtgaggccac tcacaagaca 660
 tcaacttcac ccattgtcaa gagcttcaac aggaatgagt gt 702

<210> 4
 <211> 214
 <212> PRT
 <213> Mus musculus

<400> 4

Asp Ile Leu Leu Thr Gln Ser Pro Ala Ile Leu Ser Val Ser Pro Gly
 1 5 10 15

Glu Arg Val Ser Phe Ser Cys Arg Ala Ser Gln Ser Ile Gly Thr Ser
 20 25 30

Ile His Trp Tyr Gln Gln Arg Thr Asn Gly Ser Pro Arg Leu Leu Ile
 35 40 45

Lys Tyr Ala Ser Glu Ser Ile Ser Gly Ile Pro Ser Arg Phe Ser Gly
 50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Ser Ile Asn Ser Val Glu Ser
 65 70 75 80

Glu Asp Ile Ala Asp Tyr Tyr Cys Gln Gln Ile Asn Ser Trp Pro Thr

85 90 95
 Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg Ala Asp Ala Ala
 100 105 110
 Pro Thr Val Ser Ile Phe Pro Pro Ser Ser Glu Gln Leu Thr Ser Gly
 115 120 125
 Gly Ala Ser Val Val Cys Phe Leu Asn Asn Phe Tyr Pro Lys Asp Ile
 130 135 140
 Asn Val Lys Trp Lys Ile Asp Gly Ser Glu Arg Gln Asn Gly Val Leu
 145 150 155 160
 Asn Ser Trp Thr Asp Gln Asp Ser Lys Asp Ser Thr Tyr Ser Met Ser
 165 170 175
 Ser Thr Leu Thr Leu Thr Lys Asp Glu Tyr Glu Arg His Asn Ser Tyr
 180 185 190
 Thr Cys Glu Ala Thr His Lys Thr Ser Thr Ser Pro Ile Val Lys Ser
 195 200 205
 Phe Asn Arg Asn Glu Cys
 210
 <210> 5
 <211> 109
 <212> PRT
 <213> Mus musculus
 <400> 5
 Asp Ile Leu Leu Thr Gln Ser Pro Ala Ile Leu Ser Val Ser Pro Gly
 1 5 10 15
 Glu Arg Val Ser Phe Ser Cys Arg Ala Ser Gln Ser Ile Gly Thr Ser
 20 25 30
 Ile His Trp Tyr Gln Gln Arg Thr Asn Gly Ser Pro Arg Leu Leu Ile
 35 40 45
 Lys Tyr Ala Ser Glu Ser Ile Ser Gly Ile Pro Ser Arg Phe Ser Gly
 50 55 60
 Ser Gly Ser Gly Thr Asp Phe Thr Leu Ser Ile Asn Ser Val Glu Ser
 65 70 75 80
 Glu Asp Ile Ala Asp Tyr Tyr Cys Gln Gln Ile Asn Ser Trp Pro Thr

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90

95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg Ala
 100 105

<210> 6

<211> 118

<212> PRT

<213> Mus musculus

<400> 6

Asp Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
 1 5 10 15

Ser Leu Ser Leu Thr Cys Thr Val Thr Asp Tyr Ser Ile Thr Ser Asp
 20 25 30

Tyr Ala Trp Asn Trp Ile Arg Gln Phe Pro Gly Asn Lys Leu Glu Trp
 35 40 45

Met Gly Tyr Ile Ser Tyr Ser Gly Ser Thr Ser Tyr Asn Pro Ser Leu
 50 55 60

Lys Ser Arg Ile Ser Ile Thr Arg Asp Thr Ser Lys Asn Gln Phe Phe
 65 70 75 80

Leu Gln Leu Asn Ser Val Thr Thr Glu Asp Thr Ala Thr Tyr Tyr Cys
 85 90 95

Ala Ser Phe Asp Tyr Ala His Ala Met Asp Tyr Trp Gly Gln Gly Thr
 100 105 110

Ser Val Thr Val Ser Ser
 115

<210> 7

<211> 256

<212> PRT

<213> Mus musculus

<400> 7

Met Thr Ala Pro Gly Ala Ala Gly Arg Cys Pro Pro Thr Thr Trp Leu
 1 5 10 15

Gly Ser Leu Leu Leu Leu Val Cys Leu Leu Ala Ser Arg Ser Ile Thr
 20 25 30

Glu Glu Val Ser Glu Tyr Cys Ser His Met Ile Gly Ser Gly His Leu
 35 40 45

Gln Ser Leu Gln Arg Leu Ile Asp Ser Gln Met Glu Thr Ser Cys Gln
 50 55 60

Ile Thr Phe Glu Phe Val Asp Gln Glu Gln Leu Lys Asp Pro Val Cys
 65 70 75 80

Tyr Leu Lys Lys Ala Phe Leu Leu Val Gln Asp Ile Met Glu Asp Thr
 85 90 95

Met Arg Phe Arg Asp Asn Thr Pro Asn Ala Ile Ala Ile Val Gln Leu
 100 105 110

Gln Glu Leu Ser Leu Arg Leu Lys Ser Cys Phe Thr Lys Asp Tyr Glu
 115 120 125

Glu His Asp Lys Ala Cys Val Arg Thr Phe Tyr Glu Thr Pro Leu Gln
 130 135 140

Leu Leu Glu Lys Val Lys Asn Val Phe Asn Glu Thr Lys Asn Leu Leu
 145 150 155 160

Asp Lys Asp Trp Asn Ile Phe Ser Lys Asn Cys Asn Asn Ser Phe Ala
 165 170 175

Glu Cys Ser Ser Gln Gly His Glu Arg Gln Ser Glu Gly Ser Ser Ser
 180 185 190

Pro Gln Leu Gln Glu Ser Val Phe His Leu Leu Val Pro Ser Val Ile
 195 200 205

Leu Val Leu Leu Ala Val Gly Gly Leu Leu Phe Tyr Arg Trp Arg Arg
 210 215 220

Arg Ser His Gln Glu Pro Gln Arg Ala Asp Ser Pro Leu Glu Gln Pro
 225 230 235 240

Glu Gly Ser Pro Leu Thr Gln Asp Asp Arg Gln Val Glu Leu Pro Val
 245 250 255

<210> 8
 <211> 554
 <212> PRT
 <213> Mus musculus

<400> 8

Met Thr Ala Pro Gly Ala Ala Gly Arg Cys Pro Pro Thr Thr Trp Leu
 1 5 10 15

Gly Ser Leu Leu Leu Leu Val Cys Leu Leu Ala Ser Arg Ser Ile Thr
 20 25 30

Glu Glu Val Ser Glu Tyr Cys Ser His Met Ile Gly Ser Gly His Leu
 35 40 45

Gln Ser Leu Gln Arg Leu Ile Asp Ser Gln Met Glu Thr Ser Cys Gln
 50 55 60

Ile Thr Phe Glu Phe Val Asp Gln Glu Gln Leu Lys Asp Pro Val Cys
 65 70 75 80

Tyr Leu Lys Lys Ala Phe Leu Leu Val Gln Asp Ile Met Glu Asp Thr
 85 90 95

Met Arg Phe Arg Asp Asn Thr Pro Asn Ala Ile Ala Ile Val Gln Leu
 100 105 110

Gln Glu Leu Ser Leu Arg Leu Lys Ser Cys Phe Thr Lys Asp Tyr Glu
 115 120 125

Glu His Asp Lys Ala Cys Val Arg Thr Phe Tyr Glu Thr Pro Leu Gln
 130 135 140

Leu Leu Glu Lys Val Lys Asn Val Phe Asn Glu Thr Lys Asn Leu Leu
 145 150 155 160

Asp Lys Asp Trp Asn Ile Phe Ser Lys Asn Cys Asn Asn Ser Phe Ala
 165 170 175

Glu Cys Ser Ser Gln Asp Val Val Thr Lys Pro Asp Cys Asn Cys Leu
 180 185 190

Tyr Pro Lys Ala Ile Pro Ser Ser Asp Pro Ala Ser Val Ser Pro His
 195 200 205

Gln Pro Leu Ala Pro Ser Met Ala Pro Val Ala Gly Leu Thr Trp Glu
 210 215 220

Asp Ser Glu Gly Thr Glu Gly Ser Ser Leu Leu Pro Gly Glu Gln Pro
 225 230 235 240

Leu His Thr Val Asp Pro Gly Ser Ala Lys Gln Arg Pro Pro Arg Ser
 245 250 255

Thr Cys Gln Ser Phe Glu Pro Pro Glu Thr Pro Val Val Lys Asp Ser
 260 265 270

Thr Ile Gly Gly Ser Pro Gln Pro Arg Pro Ser Val Gly Ala Phe Asn
 275 280 285

Pro Gly Met Glu Asp Ile Leu Asp Ser Ala Met Gly Thr Asn Trp Val
 290 295 300

Pro Glu Glu Ala Ser Gly Glu Ala Ser Glu Ile Pro Val Pro Gln Gly
 305 310 315 320

Thr Glu Leu Ser Pro Ser Arg Pro Gly Gly Gly Ser Met Gln Thr Glu
 325 330 335

Pro Ala Arg Pro Ser Asn Phe Leu Ser Ala Ser Ser Pro Leu Pro Ala
 340 345 350

Ser Ala Lys Gly Gln Gln Pro Ala Asp Val Thr Gly Thr Ala Leu Pro
 355 360 365

Arg Val Gly Pro Val Arg Pro Thr Gly Gln Asp Trp Asn His Thr Pro
 370 375 380

Gln Lys Thr Asp His Pro Ser Ala Leu Leu Arg Asp Pro Pro Glu Pro
 385 390 395 400

Gly Ser Pro Arg Ile Ser Ser Leu Arg Pro Gln Gly Leu Ser Asn Pro
 405 410 415

Ser Thr Leu Ser Ala Gln Pro Gln Leu Ser Arg Ser His Ser Ser Gly
 420 425 430

Ser Val Leu Pro Leu Gly Glu Leu Glu Gly Arg Arg Ser Thr Arg Asp
 435 440 445

Arg Arg Ser Pro Ala Glu Pro Glu Gly Gly Pro Ala Ser Glu Gly Ala
 450 455 460

Ala Arg Pro Leu Pro Arg Phe Asn Ser Val Pro Leu Thr Asp Thr Gly
 465 470 475 480

His Glu Arg Gln Ser Glu Gly Ser Ser Ser Pro Gln Leu Gln Glu Ser
 485 490 495

Val Phe His Leu Leu Val Pro Ser Val Ile Leu Val Leu Leu Ala Val
 500 505 510

Gly Gly Leu Leu Phe Tyr Arg Trp Arg Arg Arg Ser His Gln Glu Pro
 515 520 525

Gln Arg Ala Asp Ser Pro Leu Glu Gln Pro Glu Gly Ser Pro Leu Thr
 530 535 540

Gln Asp Asp Arg Gln Val Glu Leu Pro Val
 545 550

<210> 9
 <211> 438
 <212> PRT
 <213> Mus musculus

<400> 9

Met Thr Ala Pro Gly Ala Ala Gly Arg Cys Pro Pro Thr Thr Trp Leu
 1 5 10 15

Gly Ser Leu Leu Leu Val Cys Leu Leu Ala Ser Arg Ser Ile Thr
 20 25 30

Glu Glu Val Ser Glu Tyr Cys Ser His Met Ile Gly Ser Gly His Leu
 35 40 45

Gln Ser Leu Gln Arg Leu Ile Asp Ser Gln Met Glu Thr Ser Cys Gln
 50 55 60

Ile Thr Phe Glu Phe Val Asp Gln Glu Gln Leu Lys Asp Pro Val Cys
 65 70 75 80

Tyr Leu Lys Lys Ala Phe Leu Leu Val Gln Asp Ile Met Glu Asp Thr
 85 90 95

Met Arg Phe Arg Asp Asn Thr Pro Asn Ala Ile Ala Ile Val Gln Leu
 100 105 110

Gln Glu Leu Ser Leu Arg Leu Lys Ser Cys Phe Thr Lys Asp Tyr Glu
 115 120 125

Glu His Asp Lys Ala Cys Val Arg Thr Phe Tyr Glu Thr Pro Leu Gln
 130 135 140

Leu Leu Glu Lys Val Lys Asn Val Phe Asn Glu Thr Lys Asn Leu Leu
 145 150 155 160

Asp Lys Asp Trp Asn Ile Phe Ser Lys Asn Cys Asn Asn Ser Phe Ala
 165 170 175

Glu Cys Ser Ser Gln Asp Val Val Thr Lys Pro Asp Cys Asn Cys Leu
 180 185 190

Tyr Pro Lys Ala Ile Pro Ser Ser Asp Pro Ala Ser Val Ser Pro His
 195 200 205

Gln Pro Leu Ala Pro Ser Met Ala Pro Val Ala Gly Leu Thr Trp Glu
 210 215 220

Asp Ser Glu Gly Thr Glu Gly Ser Ser Leu Leu Pro Gly Glu Gln Pro
 225 230 235 240

Leu His Thr Val Asp Pro Gly Ser Ala Lys Gln Arg Pro Pro Arg Ser
 245 250 255

Thr Cys Gln Ser Phe Glu Pro Pro Glu Thr Pro Val Val Lys Asp Ser
 260 265 270

Thr Ile Gly Gly Ser Pro Gln Pro Arg Pro Ser Val Gly Ala Phe Asn
 275 280 285

Pro Gly Met Glu Asp Ile Leu Asp Ser Ala Met Gly Thr Asn Trp Val
 290 295 300

Pro Glu Glu Ala Ser Gly Glu Ala Ser Glu Ile Pro Val Pro Gln Gly
 305 310 315 320

Thr Glu Leu Ser Pro Ser Arg Pro Gly Gly Gly Ser Met Gln Thr Glu
 325 330 335

Pro Ala Arg Pro Ser Asn Phe Leu Ser Ala Ser Ser Pro Leu Pro Ala
 340 345 350

Ser Ala Lys Gly Gln Gln Pro Ala Asp Val Thr Gly His Glu Arg Gln
 355 360 365

Ser Glu Gly Ser Ser Ser Pro Gln Leu Gln Glu Ser Val Phe His Leu
 370 375 380

Leu Val Pro Ser Val Ile Leu Val Leu Leu Ala Val Gly Gly Leu Leu
 385 390 395 400

Phe Tyr Arg Trp Arg Arg Arg Ser His Gln Glu Pro Gln Arg Ala Asp
 405 410 415

Ser Pro Leu Glu Gln Pro Glu Gly Ser Pro Leu Thr Gln Asp Asp Arg
 420 425 430

Gln Val Glu Leu Pro Val
 435

<210> 10
 <211> 441
 <212> PRT
 <213> Mus musculus

<400> 10

Glu Ile Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Thr Gly Thr
 1 5 10 15

Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ser Phe Thr Gly Tyr
 20 25 30

Phe Met His Trp Val Lys Gln Ser His Gly Lys Ser Leu Glu Trp Ile
 35 40 45

Gly Tyr Ile Ser Cys Tyr Asn Gly Asp Thr Asn Tyr Asn Gln Asn Phe
 50 55 60

Lys Gly Lys Ala Thr Phe Thr Val Asp Thr Ser Ser Ser Thr Ala Tyr
 65 70 75 80

Met Gln Phe Asn Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys
 85 90 95

Ala Arg Glu Gly Gly Asn Tyr Pro Ala Tyr Trp Gly Gln Gly Thr Leu
 100 105 110

Val Thr Val Ser Ala Ala Lys Thr Thr Pro Pro Ser Val Tyr Pro Leu
 115 120 125

Ala Pro Gly Ser Ala Ala Gln Thr Asn Ser Met Val Thr Leu Gly Cys
 130 135 140

Leu Val Lys Gly Tyr Phe Pro Glu Pro Val Thr Val Thr Trp Asn Ser
 145 150 155 160

Gly Ser Leu Ser Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser
 165 170 175

Asp Leu Tyr Thr Leu Ser Ser Ser Val Thr Val Pro Ser Ser Thr Trp
 180 185 190

Pro Ser Glu Thr Val Thr Cys Asn Val Ala His Pro Ala Ser Ser Thr
 195 200 205

Lys Val Asp Lys Lys Ile Val Pro Arg Asp Cys Gly Cys Lys Pro Cys
 210 215 220

Ile Cys Thr Val Pro Glu Val Ser Ser Val Phe Ile Phe Pro Pro Lys
 225 230 235 240

Pro Lys Asp Val Leu Thr Ile Thr Leu Thr Pro Lys Val Thr Cys Val
 245 250 255

Val Val Asp Ile Ser Lys Asp Asp Pro Glu Val Gln Phe Ser Trp Phe
 260 265 270

Val Asp Asp Val Glu Val His Thr Ala Gln Thr Gln Pro Arg Glu Glu
 275 280 285

Gln Phe Asn Ser Thr Phe Arg Ser Val Ser Glu Leu Pro Ile Met His
 290 295 300

Gln Asp Trp Leu Asn Gly Lys Glu Phe Lys Cys Arg Val Asn Ser Ala
 305 310 315 320

Ala Phe Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Thr Lys Gly Arg
 325 330 335

Pro Lys Ala Pro Gln Val Tyr Thr Ile Pro Pro Pro Lys Glu Gln Met
 340 345 350

Ala Lys Asp Lys Val Ser Leu Thr Cys Met Ile Thr Asp Phe Phe Pro
 355 360 365

Glu Asp Ile Thr Val Glu Trp Gln Trp Asn Gly Gln Pro Ala Glu Asn
 370 375 380

Tyr Lys Asn Thr Gln Pro Ile Met Asp Thr Asp Gly Ser Tyr Phe Val
 385 390 395 400

Tyr Ser Lys Leu Asn Val Gln Lys Ser Asn Trp Glu Ala Gly Asn Thr
 405 410 415

Phe Thr Cys Ser Val Leu His Glu Gly Leu His Asn His His Thr Glu
 420 425 430

Lys Ser Leu Ser His Ser Pro Gly Lys
 435 440

<210> 11
 <211> 214
 <212> PRT
 <213> Mus musculus
 <400> 11

Asp Ile Val Met Thr Gln Ser His Lys Phe Met Ser Thr Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Asn Val Gly Thr Ala
20 25 30

Val Thr Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro Lys Leu Leu Ile
35 40 45

Tyr Trp Thr Ser Thr Arg His Ala Gly Val Pro Asp Arg Phe Thr Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Asp Val Gln Ser
65 70 75 80

Glu Asp Leu Ala Asp Tyr Phe Cys Gln Gln Tyr Ser Ser Tyr Pro Leu
85 90 95

Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys Arg Ala Asp Ala Ala
100 105 110

Pro Thr Val Ser Ile Phe Pro Pro Ser Ser Glu Gln Leu Thr Ser Gly
115 120 125

Gly Ala Ser Val Val Cys Phe Leu Asn Asn Phe Tyr Pro Lys Asp Ile
130 135 140

Asn Val Lys Trp Lys Ile Asp Gly Ser Glu Arg Gln Asn Gly Val Leu
145 150 155 160

Asn Ser Trp Thr Asp Gln Asp Ser Lys Asp Ser Thr Tyr Ser Met Ser
165 170 175

Ser Thr Leu Thr Leu Thr Lys Asp Glu Tyr Glu Arg His Asn Ser Tyr
180 185 190

Thr Cys Glu Ala Thr His Lys Thr Ser Thr Ser Pro Ile Val Lys Ser
195 200 205

Phe Asn Arg Asn Glu Cys
210

<210> 12
<211> 449
<212> PRT
<213> Mus musculus

<400> 12

Glu Val Lys Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Lys Leu Ser Cys Ala Thr Ser Gly Phe Thr Phe Ser Asp Tyr
20 25 30

Tyr Met Tyr Trp Val Arg Gln Thr Pro Glu Lys Arg Leu Glu Trp Val
35 40 45

Ala Tyr Ile Ser Asn Gly Gly Gly Ser Thr Tyr Tyr Pro Asp Thr Val
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Thr Leu Tyr
65 70 75 80

Leu Gln Met Ser Arg Leu Lys Ser Glu Asp Thr Ala Met Tyr Tyr Cys
85 90 95

Ala Arg Gln Gly Ser Tyr Gly Tyr Pro Phe Ala Tyr Trp Gly Gln Gly
100 105 110

Thr Leu Val Thr Val Ser Ala Ala Lys Thr Thr Ala Pro Ser Val Tyr
115 120 125

Pro Leu Ala Pro Val Cys Gly Asp Thr Thr Gly Ser Ser Val Thr Leu
130 135 140

Gly Cys Leu Val Lys Gly Tyr Phe Pro Glu Pro Val Thr Leu Thr Trp
145 150 155 160

Asn Ser Gly Ser Leu Ser Ser Gly Val His Thr Phe Pro Ala Val Leu
165 170 175

Gln Ser Asp Leu Tyr Thr Leu Ser Ser Ser Val Thr Val Thr Ser Ser
180 185 190

Thr Trp Pro Ser Gln Ser Ile Thr Cys Asn Val Ala His Pro Ala Ser
195 200 205

Ser Thr Lys Val Asp Lys Lys Ile Glu Pro Arg Gly Pro Thr Ile Lys
210 215 220

Pro Cys Pro Pro Cys Lys Cys Pro Ala Pro Asn Leu Leu Gly Gly Pro
225 230 235 240

Ser Val Phe Ile Phe Pro Pro Lys Ile Lys Asp Val Leu Met Ile Ser
245 250 255

Leu Ser Pro Ile Val Thr Cys Val Val Val Asp Val Ser Glu Asp Asp
260 265 270

Pro Asp Val Gln Ile Ser Trp Phe Val Asn Asn Val Glu Val His Thr
275 280 285

Ala Gln Thr Gln Thr His Arg Glu Asp Tyr Asn Ser Thr Leu Arg Val
290 295 300

Val Ser Ala Leu Pro Ile Gln His Gln Asp Trp Met Ser Gly Lys Glu
305 310 315 320

Phe Lys Cys Lys Val Asn Asn Lys Asp Leu Pro Ala Pro Ile Glu Arg
325 330 335

Thr Ile Ser Lys Pro Lys Gly Ser Val Arg Ala Pro Gln Val Tyr Val
340 345 350

Leu Pro Pro Pro Glu Glu Glu Met Thr Lys Lys Gln Val Thr Leu Thr
355 360 365

Cys Met Val Thr Asp Phe Met Pro Glu Asp Ile Tyr Val Glu Trp Thr
370 375 380

Asn Asn Gly Lys Thr Glu Leu Asn Tyr Lys Asn Thr Glu Pro Val Leu
385 390 395 400

Asp Ser Asp Gly Ser Tyr Phe Met Tyr Ser Lys Leu Arg Val Glu Lys
405 410 415

Lys Asn Trp Val Glu Arg Asn Ser Tyr Ser Cys Ser Val Val His Glu
420 425 430

Gly Leu His Asn His His Thr Thr Lys Ser Phe Ser Arg Thr Pro Gly
435 440 445

Lys

<210> 13
<211> 214
<212> PRT
<213> Mus musculus

<400> 13

Ala Ile Gln Met Thr Gln Thr Thr Ser Ser Leu Ser Ala Ser Leu Gly
1 5 10 15

Asp Arg Val Thr Ile Ser Cys Ser Ala Ser Gln Gly Ile Ser Asn Tyr
 20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Asp Gly Thr Val Lys Leu Leu Ile
 35 40 45

Tyr Tyr Thr Ser Ser Leu His Ser Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60

Ser Gly Ser Gly Thr Asp Tyr Ser Leu Thr Ile Ser Asn Leu Glu Pro
 65 70 75 80

Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Tyr Ser Lys Leu Pro Trp
 85 90 95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg Ala Asp Ala Ala
 100 105 110

Pro Thr Val Ser Ile Phe Pro Pro Ser Ser Glu Gln Leu Thr Ser Gly
 115 120 125

Gly Ala Ser Val Val Cys Phe Leu Asn Asn Phe Tyr Pro Lys Asp Ile
 130 135 140

Asn Val Lys Trp Lys Ile Asp Gly Ser Glu Arg Gln Asn Gly Val Leu
 145 150 155 160

Asn Ser Trp Thr Asp Gln Asp Ser Lys Asp Ser Thr Tyr Ser Met Ser
 165 170 175

Ser Thr Leu Thr Leu Thr Lys Asp Glu Tyr Glu Arg His Asn Ser Tyr
 180 185 190

Thr Cys Glu Ala Thr His Lys Thr Ser Thr Ser Pro Ile Val Lys Ser
 195 200 205

Phe Asn Arg Asn Glu Cys
 210

<210> 14
 <211> 522
 <212> PRT
 <213> Mus musculus

<400> 14

Asp Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
 1 5 10 15

Ser Leu Ser Leu Thr Cys Thr Val Thr Gly Tyr Ser Ile Thr Ser Asp
 20 25 30

Tyr Ala Trp Asn Trp Ile Arg Gln Phe Pro Gly Asn Lys Leu Glu Trp
 35 40 45

Met Gly Tyr Ile Ser Tyr Ser Gly Ser Thr Ser Tyr Asn Pro Ser Leu
 50 55 60

Lys Ser Arg Ile Ser Ile Thr Arg Asp Thr Ser Lys Asn Gln Phe Phe
 65 70 75 80

Leu Gln Leu Asn Ser Val Thr Thr Glu Asp Thr Ala Thr Tyr Tyr Cys
 85 90 95

Ala Arg Leu Glu Thr Trp Leu Phe Asp Tyr Trp Gly Gln Gly Thr Thr
 100 105 110

Leu Thr Val Ser Ser Ala Lys Thr Thr Pro Pro Ser Val Tyr Pro Leu
 115 120 125

Ala Pro Gly Cys Gly Asp Thr Thr Gly Ser Ser Val Thr Leu Gly Cys
 130 135 140

Leu Val Lys Gly Tyr Phe Pro Glu Ser Val Thr Val Thr Trp Asn Ser
 145 150 155 160

Gly Ser Leu Ser Ser Ser Val His Thr Phe Pro Ala Leu Leu Gln Ser
 165 170 175

Gly Leu Tyr Thr Met Ser Ser Ser Val Thr Val Pro Ser Ser Thr Trp
 180 185 190

Pro Ser Gln Thr Val Thr Cys Ser Val Ala His Pro Ala Ser Ser Thr
 195 200 205

Thr Val Asp Lys Lys Leu Glu Pro Ser Gly Pro Ile Ser Thr Ile Asn
 210 215 220

Pro Cys Pro Pro Cys Lys Glu Cys His Lys Cys Pro Ala Pro Asn Leu
 225 230 235 240

Glu Gly Gly Pro Ser Val Phe Ile Phe Pro Pro Asn Ile Lys Asp Val
 245 250 255

Leu Met Ile Ser Leu Thr Pro Lys Val Thr Cys Val Val Val Asp Val
 260 265 270

Ser Glu Asp Asp Pro Asp Val Gln Ile Ser Trp Phe Val Asn Asn Val
 275 280 285

Glu Val His Thr Ala Gln Thr Gln Thr His Arg Glu Asp Tyr Asn Ser
 290 295 300

Thr Ile Arg Val Val Ser Thr Leu Pro Ile Gln His Gln Asp Trp Met
 305 310 315 320

Ser Gly Lys Glu Phe Lys Cys Lys Val Asn Asn Lys Asp Leu Pro Ser
 325 330 335

Pro Ile Glu Arg Thr Ile Ser Lys Ile Lys Gly Leu Val Arg Ala Pro
 340 345 350

Gln Val Tyr Ile Leu Pro Pro Pro Ala Glu Gln Leu Ser Arg Lys Asp
 355 360 365

Val Ser Leu Thr Cys Leu Val Val Gly Phe Asn Pro Gly Asp Ile Ser
 370 375 380

Val Glu Trp Thr Ser Asn Gly His Thr Glu Glu Asn Tyr Lys Asp Thr
 385 390 395 400

Ala Pro Val Leu Asp Ser Asp Gly Ser Tyr Phe Ile Tyr Ser Lys Leu
 405 410 415

Asn Met Lys Thr Ser Lys Trp Glu Lys Thr Asp Ser Phe Ser Cys Asn
 420 425 430

Val Arg His Glu Gly Leu Lys Asn Tyr Tyr Leu Lys Lys Thr Ile Ser
 435 440 445

Arg Ser Pro Gly Leu Asp Leu Asp Asp Ile Cys Ala Glu Ala Lys Asp
 450 455 460

Gly Glu Leu Asp Gly Leu Trp Thr Thr Ile Thr Ile Phe Ile Ser Leu
 465 470 475 480

Phe Leu Leu Ser Val Cys Tyr Ser Ala Ser Val Thr Leu Phe Lys Val
 485 490 495

Lys Trp Ile Phe Ser Ser Val Val Glu Leu Lys Gln Lys Ile Ser Pro
 500 505 510

Asp Tyr Arg Asn Met Ile Gly Gln Gly Ala
 515 520

<210> 15
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 <213> Mus musculus

<400> 15

Asp Ile Leu Leu Thr Gln Ser Pro Ala Ile Leu Ser Val Ser Pro Gly
 1 5 10 15

Glu Arg Val Ser Phe Ser Cys Arg Ala Ser Gln Ser Ile Gly Thr Ser
 20 25 30

Ile His Trp Tyr Gln Gln Arg Thr Asn Gly Ser Pro Arg Leu Leu Ile
 35 40 45

Lys Tyr Ala Ser Glu Ser Ile Ser Gly Ile Pro Ser Arg Phe Ser Gly
 50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Ser Ile Asn Ser Val Glu Ser
 65 70 75 80

Glu Asp Ile Ala Asp Tyr Tyr Cys Gln Gln Ser Asn Ser Trp Pro Thr
 85 90 95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Trp Ala Asp Ala Ala
 100 105 110

Pro Thr Val Ser Ile Phe Pro Pro Ser Ser Glu Gln Leu Thr Ser Gly
 115 120 125

Gly Ala Ser Val Val Cys Phe Leu Asn Asn Phe Tyr Pro Lys Asp Ile
 130 135 140

Asn Val Lys Trp Lys Ile Asp Gly Ser Glu Arg Gln Asn Gly Val Leu
 145 150 155 160

Asn Ser Trp Thr Asp Gln Asp Ser Lys Asp Ser Thr Tyr Ser Met Ser
 165 170 175

Ser Thr Leu Thr Leu Thr Lys Asp Glu Tyr Glu Arg His Asn Ser Tyr
 180 185 190

Thr Cys Glu Ala Thr His Lys Thr Ser Thr Ser Pro Ile Val Lys Ser
 195 200 205

Phe Asn Arg Asn Glu Cys
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<210> 16
<211> 5
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<213> Homo sapiens

<400> 16

Gly Tyr Phe Met His
1 5

<210> 17
<211> 5
<212> PRT
<213> Homo sapiens

<400> 17

Asp Tyr Tyr Met Tyr
1 5

<210> 18
<211> 6
<212> PRT
<213> Homo sapiens

<400> 18

Ser Asp Tyr Ala Trp Asn
1 5

<210> 19
<211> 17
<212> PRT
<213> Homo sapiens

<400> 19

Tyr Ile Ser Cys Tyr Asn Gly Asp Thr Asn Tyr Asn Gln Asn Phe Lys
1 5 10 15

Gly

<210> 20
<211> 17
<212> PRT
<213> Homo sapiens

<400> 20

Tyr Ile Ser Asn Gly Gly Gly Ser Thr Tyr Tyr Pro Asp Thr Val Lys
1 5 10 15

Gly

<210> 21
<211> 16
<212> PRT
<213> Homo sapiens

<400> 21

Tyr Ile Ser Tyr Ser Gly Ser Thr Ser Tyr Asn Pro Ser Leu Lys Ser
1 5 10 15

<210> 22
<211> 8
<212> PRT
<213> Homo sapiens

<400> 22

Glu Gly Gly Asn Tyr Pro Ala Tyr
1 5

<210> 23
<211> 10
<212> PRT
<213> Homo sapiens

<400> 23

Gln Gly Ser Tyr Gly Tyr Pro Phe Ala Tyr
1 5 10

<210> 24
<211> 9
<212> PRT
<213> Homo sapiens

<400> 24

Phe Asp Tyr Ala His Ala Met Asp Tyr
1 5

<210> 25
<211> 8
<212> PRT
<213> Homo sapiens

<400> 25

Leu Glu Thr Trp Leu Phe Asp Tyr
1 5

<210> 26
<211> 7
<212> PRT
<213> Homo sapiens

<400> 26

Asp Tyr Gly Trp Phe Asp Tyr

1 5

<210> 27
<211> 11
<212> PRT
<213> Homo sapiens

<400> 27

Lys Ala Ser Gln Asn Val Gly Thr Ala Val Thr
1 5 10

<210> 28
<211> 11
<212> PRT
<213> Homo sapiens

<400> 28

Ser Ala Ser Gln Gly Ile Ser Asn Tyr Leu Asn
1 5 10

<210> 29
<211> 11
<212> PRT
<213> Homo sapiens

<400> 29

Arg Ala Ser Gln Ser Ile Gly Thr Ser Ile His
1 5 10

<210> 30
<211> 7
<212> PRT
<213> Homo sapiens

<400> 30

Trp Thr Ser Thr Arg His Ala
1 5

<210> 31
<211> 7
<212> PRT
<213> Homo sapiens

<400> 31

Tyr Thr Ser Ser Leu His Ser
1 5

<210> 32
<211> 7
<212> PRT
<213> Homo sapiens

<400> 32

Tyr Ala Ser Glu Ser Ile Ser
1 5

<210> 33

<211> 7

<212> PRT

<213> Homo sapiens

<400> 33

Tyr Thr Ser Glu Ser Ile Ser
1 5

<210> 34

<211> 9

<212> PRT

<213> Homo sapiens

<400> 34

Gln Gln Tyr Ser Ser Tyr Pro Leu Thr
1 5

<210> 35

<211> 9

<212> PRT

<213> Homo sapiens

<400> 35

Gln Gln Tyr Ser Lys Leu Pro Trp Thr
1 5

<210> 36

<211> 9

<212> PRT

<213> Homo sapiens

<400> 36

Gln Gln Ile Asn Ser Trp Pro Thr Thr
1 5

<210> 37

<211> 9

<212> PRT

<213> Homo sapiens

<400> 37

Gln Gln Ser Asn Ser Trp Pro Thr Thr
1 5

<210> 38

<211> 9

<212> PRT
<213> Homo sapiens

<400> 38

Gln Gln Tyr Ser Ser Trp Pro Thr Thr
1 5

<210> 39
<211> 130
<212> PRT
<213> Homo sapiens

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<222> (23)..(23)
<223> Xaa= any amino acid

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<223> Xaa= any amino acid

<220>
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<222> (31)..(36)
<223> Xaa= any amino acid

<220>
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<222> (51)..(51)
<223> Xaa= any amino acid

<220>
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<222> (56)..(57)
<223> Xaa= any amino acid

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<222> (59)..(59)
<223> Xaa= any amino acid

<220>
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<222> (61)..(61)
<223> Xaa= any amino acid

<220>
<221> misc_feature
<222> (84)..(84)
<223> Xaa= any amino acid

<220>
<221> misc_feature
<222> (86)..(86)

<223> Xaa= any amino acid

<220>

<221> misc_feature

<222> (101)..(116)

<223> Xaa= any amino acid

<220>

<221> misc_feature

<222> (119)..(119)

<223> Xaa= any amino acid

<220>

<221> misc_feature

<222> (125)..(125)

<223> Xaa= any amino acid

<400> 39

Asp Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
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Thr Leu Ser Leu Thr Cys Xaa Val Ser Gly Xaa Ser Xaa Ser Xaa Xaa
20 25 30

Xaa Xaa Xaa Xaa Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp
35 40 45

Ile Gly Xaa Tyr Tyr Arg Ala Xaa Xaa Gly Xaa Thr Xaa Tyr Asn Pro
50 55 60

Ser Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln
65 70 75 80

Phe Ser Leu Xaa Leu Xaa Ser Val Thr Ala Ala Asp Thr Ala Val Tyr
85 90 95

Tyr Cys Ala Arg Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
100 105 110

Xaa Xaa Xaa Xaa Phe Asp Xaa Trp Gly Gln Gly Thr Xaa Val Thr Val
115 120 125

Ser Ser
130

<210> 40

<211> 354

<212> DNA

<213> Homo sapiens

<400> 40

gacgtacaac ttcaagaatc tggcccaggt ctcgtaaac cttctcaaac tctctcactc 60

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acctgcactg ttactgacta ctctattaca tccgactacg cttggaactg gatccgacaa    120
tttcctggta aaaaactcga atggatgggt tatatttctt actctggctc cacctcttac    180
aatccttctc tgaaatcacg catcacaatt tcccgcgata cctctaaaaa tcaattttca    240
ctccaactca attctgttac cgccgccgat actgccacct actactgtgc ctcttttgac    300
tacgctcacg ccatggatta ttggggacag ggtactaccg ctaccgtaag ctca        354

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<210> 41
<211> 118
<212> PRT
<213> Homo sapiens

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<400> 41

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Asp Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
1             5             10             15

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Thr Leu Ser Leu Thr Cys Thr Val Thr Asp Tyr Ser Ile Thr Ser Asp
20             25             30

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Tyr Ala Trp Asn Trp Ile Arg Gln Phe Pro Gly Lys Lys Leu Glu Trp
35             40             45

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Met Gly Tyr Ile Ser Tyr Ser Gly Ser Thr Ser Tyr Asn Pro Ser Leu
50             55             60

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Lys Ser Arg Ile Thr Ile Ser Arg Asp Thr Ser Lys Asn Gln Phe Ser
65             70             75             80

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Leu Gln Leu Asn Ser Val Thr Ala Ala Asp Thr Ala Thr Tyr Tyr Cys
85             90             95

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Ala Ser Phe Asp Tyr Ala His Ala Met Asp Tyr Trp Gly Gln Gly Thr
100            105            110

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Thr Val Thr Val Ser Ser
115

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<210> 42
<211> 354
<212> DNA
<213> Homo sapiens

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<400> 42

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caagttcaac ttcaagaatc aggccccgga ctcgtaaac cctctcaaac tctctctctt    60
acttgcaactg tatccgatta ctctattact tcagactacg cttggaactg gatcagacaa    120
tttccccgaa aaggactcga atggatggga tataatctctt actctggctc aacctcttac    180
aaccctctc tcaaattctg aataacaatc tcacgcgata cttctaaaaa tcaattctca    240

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cttcaactta actccgttac tgccgccgac actgccgttt actactgtgc ttccttcgat 300
 tacgcccacg ctatggatta ttggggacaa ggaactaccg tcaactgtcag ctca 354

<210> 43
 <211> 118
 <212> PRT
 <213> Homo sapiens

<400> 43

Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
 1 5 10 15

Thr Leu Ser Leu Thr Cys Thr Val Ser Asp Tyr Ser Ile Thr Ser Asp
 20 25 30

Tyr Ala Trp Asn Trp Ile Arg Gln Phe Pro Gly Lys Gly Leu Glu Trp
 35 40 45

Met Gly Tyr Ile Ser Tyr Ser Gly Ser Thr Ser Tyr Asn Pro Ser Leu
 50 55 60

Lys Ser Arg Ile Thr Ile Ser Arg Asp Thr Ser Lys Asn Gln Phe Ser
 65 70 75 80

Leu Gln Leu Asn Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Ala Ser Phe Asp Tyr Ala His Ala Met Asp Tyr Trp Gly Gln Gly Thr
 100 105 110

Thr Val Thr Val Ser Ser
 115

<210> 44
 <211> 327
 <212> DNA
 <213> Homo sapiens

<400> 44

gaaatagttc ttactcaatc ccccggtaca ctctcagttt ccccaggcga acgcgtcact 60
 ttttcttgca gagcatcaca atcaatcggc atttcaattc attggatatca acaaaaaaca 120
 ggacaggccc cagcacttct tattaaatat gcatcagaac gagccacagg catcccagac 180
 agattttcag gttcaggatc aggcaccgat ttcacactta caatatccag agtcgaatca 240
 gaagattttg cagattacta ttgtcaacaa ataaacagct ggcccactac attcggacaa 300
 ggacacaaac tcgaaattaa acgtacg 327

<210> 45
 <211> 109
 <212> PRT
 <213> Homo sapiens

<400> 45

Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Val Ser Pro Gly
 1 5 10 15

Glu Arg Val Thr Phe Ser Cys Arg Ala Ser Gln Ser Ile Gly Thr Ser
 20 25 30

Ile His Trp Tyr Gln Gln Lys Thr Gly Gln Ser Pro Arg Leu Leu Ile
 35 40 45

Lys Tyr Ala Ser Glu Arg Ile Ser Gly Ile Pro Asp Arg Phe Ser Gly
 50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Val Glu Ser
 65 70 75 80

Glu Asp Phe Ala Asp Tyr Tyr Cys Gln Gln Ile Asn Ser Trp Pro Thr
 85 90 95

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg Thr
 100 105

<210> 46
 <211> 327
 <212> DNA
 <213> Homo sapiens

<400> 46

gaaatagttc ttactcaatc ccccggtaca ctctcagttt ccccaggcga acgcgtcact 60
 ttttcttgca gagcatcaca atcaatcggc acttcaattc attggtatca acaaaaaaca 120
 ggacaggccc cagcacttct tattaaatat gcatcagaac gagccacagg catcccagac 180
 agattttcag gttcaggatc aggcaccgat ttcacactta caatatccag agtcgaatca 240
 gaagattttg cagattacta ttgtcaacaa ataaacagct ggcccactac attcggacaa 300
 ggcacaaaac tcgaaattaa acgtacg 327

<210> 47
 <211> 109
 <212> PRT
 <213> Homo sapiens

<400> 47

Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Val Ser Pro Gly
 1 5 10 15

Glu Arg Val Thr Phe Ser Cys Arg Ala Ser Gln Ser Ile Gly Thr Ser
20 25 30

Ile His Trp Tyr Gln Gln Lys Thr Gly Gln Ala Pro Arg Leu Leu Ile
35 40 45

Lys Tyr Ala Ser Glu Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Val Glu Ser
65 70 75 80

Glu Asp Phe Ala Asp Tyr Tyr Cys Gln Gln Ile Asn Ser Trp Pro Thr
85 90 95

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg Thr
100 105

<210> 48
<211> 109
<212> PRT
<213> Homo sapiens

<400> 48

Asp Ile Leu Leu Thr Gln Ser Pro Ala Ile Leu Ser Val Ser Pro Gly
1 5 10 15

Glu Arg Val Ser Phe Ser Cys Arg Ala Ser Gln Ser Ile Gly Thr Ser
20 25 30

Ile His Trp Tyr Gln Gln Arg Thr Asn Gly Ser Pro Arg Leu Leu Ile
35 40 45

Lys Tyr Ala Ser Glu Ser Ile Ser Gly Ile Pro Asp Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Val Glu Ser
65 70 75 80

Glu Asp Phe Ala Asp Tyr Tyr Cys Gln Gln Ile Asn Ser Trp Pro Thr
85 90 95

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg Thr
100 105

<210> 49
<211> 111
<212> PRT

<213> Homo sapiens

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<222> (98)..(98)

<223> Xaa= any amino acid

<400> 49

Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser
20 25 30

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
35 40 45

Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser
50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65 70 75 80

Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Ser Ser Pro
85 90 95

Pro Xaa Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr
100 105 110

<210> 50

<211> 108

<212> PRT

<213> Homo sapiens

<400> 50

Asp Val Val Met Thr Gln Ser Pro Ala Phe Leu Ser Val Thr Pro Gly
1 5 10 15

Glu Lys Val Thr Ile Thr Cys Gln Ala Ser Glu Gly Ile Gly Asn Tyr
20 25 30

Leu Tyr Trp Tyr Gln Gln Lys Pro Asp Gln Ala Lys Leu Leu Ile Lys
35 40 45

Tyr Ala Ser Gln Ser Ile Ser Gly Val Pro Ser Arg Phe Ser Gly Ser
50 55 60

Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile Ser Ser Leu Glu Ala Glu
65 70 75 80

Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Gly Asn Lys His Pro Leu Thr
 85 90 95

Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr
 100 105

<210> 51
 <211> 109
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Low Risk Light Chain vs. VK6 Subgroup 2-1-(1) A14:

<400> 51

Asp Ile Val Leu Thr Gln Ser Pro Ala Phe Leu Ser Val Thr Pro Gly
 1 5 10 15

Glu Lys Val Thr Phe Thr Cys Gln Ala Ser Gln Ser Ile Gly Thr Ser
 20 25 30

Ile His Trp Tyr Gln Gln Lys Thr Asp Gln Ser Pro Arg Leu Leu Ile
 35 40 45

Lys Tyr Ala Ser Glu Ser Ile Ser Gly Ile Pro Ser Arg Phe Ser Gly
 50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Val Glu Ala
 65 70 75 80

Glu Asp Ala Ala Asp Tyr Tyr Cys Gln Gln Ile Asn Ser Trp Pro Thr
 85 90 95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg Thr
 100 105

<210> 52
 <211> 327
 <212> DNA
 <213> Homo sapiens

<400> 52
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 tttaacctgtc aggcttctca atctatcggc acttctattc actggtatca acaaaaaacc 120
 gatcaagctc ctaaactcct cataaaatac gcatccgaat ccatctccgg tatccccctcc 180
 agattttcag gctccggctc cggcacagat ttcaccctta ccattagctc agttgaagcc 240
 gaagacgcag ctgattacta ctgtcaacaa ataaactcat ggccactac tttcggcggc 300

ggcactaaac tcgaaataaa acgtacg

327

<210> 53
 <211> 109
 <212> PRT
 <213> Homo sapiens

<400> 53

Asp Ile Val Leu Thr Gln Ser Pro Ala Phe Leu Ser Val Thr Pro Gly
 1 5 10 15

Glu Lys Val Thr Phe Thr Cys Gln Ala Ser Gln Ser Ile Gly Thr Ser
 20 25 30

Ile His Trp Tyr Gln Gln Lys Thr Asp Gln Ala Pro Lys Leu Leu Ile
 35 40 45

Lys Tyr Ala Ser Glu Ser Ile Ser Gly Ile Pro Ser Arg Phe Ser Gly
 50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Val Glu Ala
 65 70 75 80

Glu Asp Ala Ala Asp Tyr Tyr Cys Gln Gln Ile Asn Ser Trp Pro Thr
 85 90 95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg Thr
 100 105

<210> 54
 <211> 99
 <212> PRT
 <213> Homo sapiens

<400> 54

Asp Ile Leu Leu Thr Gln Ser Pro Ala Ile Leu Ser Val Ser Pro Gly
 1 5 10 15

Glu Arg Val Ser Phe Ser Cys Arg Ala Ser Gln Ser Ile Gly Thr Ser
 20 25 30

Ile His Trp Tyr Gln Gln Arg Thr Asn Gly Ser Pro Arg Leu Leu Ile
 35 40 45

Lys Tyr Ala Ser Glu Ser Ile Ser Gly Ile Pro Ser Arg Phe Ser Gly
 50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Ser Ile Asn Ser Val Glu Ser
 65 70 75 80

Glu Asp Ile Ala Asp Tyr Tyr Cys Gln Gln Ile Asn Ser Trp Pro Thr
 85 90 95

Thr Phe Gly

<210> 55
 <211> 95
 <212> PRT
 <213> Homo sapiens
 <400> 55

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr
 20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
 35 40 45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
 65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro
 85 90 95

<210> 56
 <211> 101
 <212> PRT
 <213> Homo sapiens
 <400> 56

Asp Ile Val Met Thr Gln Thr Pro Leu Ser Leu Pro Val Thr Pro Gly
 1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu Asp Ser
 20 25 30

Asp Asp Gly Asn Thr Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln
 35 40 45

Ser Pro Gln Leu Leu Ile Tyr Thr Leu Ser Tyr Arg Ala Ser Gly Val
 50 55 60

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys
65 70 75 80

Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln
85 90 95

Arg Ile Glu Phe Pro
100

<210> 57
<211> 96
<212> PRT
<213> Homo sapiens

<400> 57

Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser
20 25 30

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
35 40 45

Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser
50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65 70 75 80

Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Ser Ser Pro
85 90 95

<210> 58
<211> 101
<212> PRT
<213> Homo sapiens

<400> 58

Asp Ile Val Met Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
1 5 10 15

Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln Ser Val Leu Tyr Ser
20 25 30

Ser Asn Asn Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln
35 40 45

Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val

50

55

60

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
65 70 75 80

Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val, Tyr Tyr Cys Gln Gln
85 90 95

Tyr Tyr Ser Thr Pro
100

<210> 59
<211> 95
<212> PRT
<213> Homo sapiens

<400> 59

Glu Thr Thr Leu Thr Gln Ser Pro Ala Phe Met Ser Ala Thr Pro Gly
1 5 10 15

Asp Lys Val Asn Ile Ser Cys Lys Ala Ser Gln Asp Ile Asp Asp Asp
20 25 30

Met Asn Trp Tyr Gln Gln Lys Pro Gly Glu Ala Ala Ile Phe Ile Ile
35 40 45

Gln Glu Ala Thr Thr Leu Val Pro Gly Ile Pro Pro Arg Phe Ser Gly
50 55 60

Ser Gly Tyr Gly Thr Asp Phe Thr Leu Thr Ile Asn Asn Ile Glu Ser
65 70 75 80

Glu Asp Ala Ala Tyr Tyr Phe Cys Leu Gln His Asp Asn Phe Pro
85 90 95

<210> 60
<211> 95
<212> PRT
<213> Homo sapiens

<400> 60

Glu Ile Val Leu Thr Gln Ser Pro Asp Phe Gln Ser Val Thr Pro Lys
1 5 10 15

Glu Lys Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Gly Ser Ser
20 25 30

Leu His Trp Tyr Gln Gln Lys Pro Asp Gln Ser Pro Lys Leu Leu Ile
35 40 45

Lys Tyr Ala Ser Gln Ser Phe Ser Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Asn Ser Leu Glu Ala
 65 70 75 80

Glu Asp Ala Ala Thr Tyr Tyr Cys His Gln Ser Ser Ser Leu Pro
 85 90 95

<210> 61
 <211> 52
 <212> PRT
 <213> Mus musculus

<400> 61

Asp Ile Leu Leu Thr Gln Ser Pro Ala Ile Leu Ser Val Ser Pro Gly
 1 5 10 15

Glu Arg Val Ser Phe Ser Cys Arg Ala Ser Gln Ser Ile Gly Thr Ser
 20 25 30

Ile His Trp Tyr Gln Gln Arg Thr Asn Gly Ser Pro Arg Leu Leu Ile
 35 40 45

Lys Tyr Ala Ser
 50

<210> 62
 <211> 57
 <212> PRT
 <213> Homo sapiens

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 <222> (31)..(33)
 <223> Xaa= any amino acid

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 <222> (36)..(37)
 <223> Xaa= any amino acid

<220>
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 <222> (39)..(39)
 <223> Xaa= any amino acid

<220>
 <221> misc_feature
 <222> (55)..(55)
 <223> Xaa= any amino acid

<400> 62

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Leu Val Xaa Xaa
20 25 30

Xaa Ile Ser Xaa Xaa Leu Xaa Trp Tyr Gln Gln Lys Pro Gly Lys Ala
35 40 45

Pro Lys Leu Leu Ile Tyr Xaa Ala Ser
50 55

<210> 63
<211> 58
<212> PRT
<213> Homo sapiens

<220>
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<223> Xaa= any amino acid

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<223> Xaa= any amino acid

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<222> (56)..(57)
<223> Xaa= any amino acid

<400> 63

Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser
20 25 30

Xaa Asp Gly Xaa Xaa Tyr Leu Asn Trp Tyr Leu Gln Lys Pro Gly Gln
35 40 45

Ser Pro Gln Leu Leu Ile Tyr Xaa Xaa Ser
50 55

<210> 64
<211> 53
<212> PRT
<213> Homo sapiens

<400> 64

Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly

1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser
 20 25 30

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
 35 40 45

Ile Tyr Gly Ala Ser
 50

<210> 65
 <211> 58
 <212> PRT
 <213> Homo sapiens

<400> 65

Asp Ile Val Met Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15

Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln Ser Val Leu Tyr Ser
 20 25 30

Ser Asn Asn Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln
 35 40 45

Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser
 50 55

<210> 66
 <211> 52
 <212> PRT
 <213> Homo sapiens

<400> 66

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr
 20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
 35 40 45

Tyr Ala Ala Ser
 50

<210> 67
 <211> 58

<212> PRT

<213> Homo sapiens

<400> 67

Asp Ile Val Met Thr Gln Thr Pro Leu Ser Leu Pro Val Thr Pro Gly
 1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu Asp Ser
 20 25 30

Asp Asp Gly Asn Thr Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln
 35 40 45

Ser Pro Gln Leu Leu Ile Tyr Thr Leu Ser
 50 55

<210> 68

<211> 53

<212> PRT

<213> Homo sapiens

<400> 68

Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly
 1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser
 20 25 30

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
 35 40 45

Ile Tyr Gly Ala Ser
 50

<210> 69

<211> 58

<212> PRT

<213> Homo sapiens

<400> 69

Asp Ile Val Met Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15

Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln Ser Val Leu Tyr Ser
 20 25 30

Ser Asn Asn Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln
 35 40 45

Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser
50 55

<210> 70
<211> 52
<212> PRT
<213> Homo sapiens

<400> 70

Glu Thr Thr Leu Thr Gln Ser Pro Ala Phe Met Ser Ala Thr Pro Gly
1 5 10 15

Asp Lys Val Asn Ile Ser Cys Lys Ala Ser Gln Asp Ile Asp Asp Asp
20 25 30

Met Asn Trp Tyr Gln Gln Lys Pro Gly Glu Ala Ala Ile Phe Ile Ile
35 40 45

Gln Glu Ala Thr
50

<210> 71
<211> 52
<212> PRT
<213> Homo sapiens

<400> 71

Glu Ile Val Leu Thr Gln Ser Pro Asp Phe Gln Ser Val Thr Pro Lys
1 5 10 15

Glu Lys Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Gly Ser Ser
20 25 30

Leu His Trp Tyr Gln Gln Lys Pro Asp Gln Ser Pro Lys Leu Leu Ile
35 40 45

Lys Tyr Ala Ser
50

<210> 72
<211> 57
<212> PRT
<213> Mus musculus

<400> 72

Glu Ser Ile Ser Gly Ile Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly
1 5 10 15

Thr Asp Phe Thr Leu Ser Ile Asn Ser Val Glu Ser Glu Asp Ile Ala
20 25 30

Asp Tyr Tyr Cys Gln Gln Ile Asn Ser Trp Pro Thr Thr Phe Gly Gly
 35 40 45

Gly Thr Lys Leu Glu Ile Lys Arg Ala
 50 55

<210> 73
 <211> 58
 <212> PRT
 <213> Homo sapiens

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 <223> Xaa= any amino acid

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 <222> (39)..(42)
 <223> Xaa= any amino acid

<220>
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 <222> (45)..(45)
 <223> Xaa= any amino acid

<400> 73

Xaa Leu Xaa Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly
 1 5 10 15

Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala
 20 25 30

Thr Tyr Tyr Cys Gln Gln Xaa Xaa Xaa Xaa Pro Glu Xaa Thr Phe Gly
 35 40 45

Gln Gly Thr Lys Val Glu Ile Lys Arg Thr
 50 55

<210> 74
 <211> 58
 <212> PRT
 <213> Homo sapiens

<220>
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 <223> Xaa= any amino acid

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 <223> Xaa= any amino acid

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 <222> (42)..(42)
 <223> Xaa= any amino acid

<220>
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 <222> (45)..(45)
 <223> Xaa= any amino acid

<400> 74

Asn Arg Xaa Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly
 1 5 10 15

Thr Asp Phe Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val Gly
 20 25 30

Val Tyr Tyr Cys Met Gln Ala Xaa Gln Xaa Pro Arg Xaa Thr Phe Gly
 35 40 45

Gln Gly Thr Lys Val Glu Ile Lys Arg Thr
 50 55

<210> 75
 <211> 58
 <212> PRT
 <213> Homo sapiens

<220>
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 <223> Xaa= any amino acid

<400> 75

Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly
 1 5 10 15

Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp Phe Ala
 20 25 30

Val Tyr Tyr Cys Gln Gln Tyr Gly Ser Ser Pro Pro Xaa Thr Phe Gly
 35 40 45

Gln Gly Thr Lys Val Glu Ile Lys Arg Thr
 50 55

<210> 76

<211> 57
 <212> PRT
 <213> Homo sapiens

<220>
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 <223> Xaa= any amino acid

<400> 76

Thr Arg Glu Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly
 1 5 10 15

Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala Glu Asp Val Ala
 20 25 30

Val Tyr Tyr Cys Gln Gln Tyr Tyr Ser Thr Pro Xaa Thr Phe Gly Gln
 35 40 45

Gly Thr Lys Val Glu Ile Lys Arg Thr
 50 55

<210> 77
 <211> 57
 <212> PRT
 <213> Homo sapiens

<400> 77

Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly
 1 5 10 15

Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala
 20 25 30

Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro Leu Thr Phe Gly Gly
 35 40 45

Gly Thr Lys Val Glu Ile Lys Arg Thr
 50 55

<210> 78
 <211> 57
 <212> PRT
 <213> Homo sapiens

<400> 78

Tyr Arg Ala Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly
 1 5 10 15

Thr Asp Phe Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val Gly

20

25

30

Val Tyr Tyr Cys Met Gln Arg Ile Glu Phe Pro Leu Thr Phe Gly Gly
 35 40 45

Gly Thr Lys Val Glu Ile Lys Arg Thr
 50 55

<210> 79
 <211> 57
 <212> PRT
 <213> Homo sapiens

<400> 79

Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly
 1 5 10 15

Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp Phe Ala
 20 25 30

Val Tyr Tyr Cys Gln Gln Tyr Gly Ser Ser Pro Leu Thr Phe Gly Gly
 35 40 45

Gly Thr Lys Val Glu Ile Lys Arg Thr
 50 55

<210> 80
 <211> 57
 <212> PRT
 <213> Homo sapiens

<400> 80

Thr Arg Glu Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly
 1 5 10 15

Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala Glu Asp Val Ala
 20 25 30

Val Tyr Tyr Cys Gln Gln Tyr Tyr Ser Thr Pro Leu Thr Phe Gly Gly
 35 40 45

Gly Thr Lys Val Glu Ile Lys Arg Thr
 50 55

<210> 81
 <211> 57
 <212> PRT
 <213> Homo sapiens

<400> 81

Thr Leu Val Pro Gly Ile Pro Pro Arg Phe Ser Gly Ser Gly Tyr Gly
1 5 10 15

Thr Asp Phe Thr Leu Thr Ile Asn Asn Ile Glu Ser Glu Asp Ala Ala
20 25 30

Tyr Tyr Phe Cys Leu Gln His Asp Asn Phe Pro Leu Thr Phe Gly Gly
35 40 45

Gly Thr Lys Val Glu Ile Lys Arg Thr
50 55

<210> 82
<211> 57
<212> PRT
<213> Homo sapiens

<400> 82

Gln Ser Phe Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly
1 5 10 15

Thr Asp Phe Thr Leu Thr Ile Asn Ser Leu Glu Ala Glu Asp Ala Ala
20 25 30

Thr Tyr Tyr Cys His Gln Ser Ser Ser Leu Pro Leu Thr Phe Gly Gly
35 40 45

Gly Thr Lys Val Glu Ile Lys Arg Thr
50 55

<210> 83
<211> 101
<212> PRT
<213> Homo sapiens

<400> 83

Asp Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
1 5 10 15

Ser Leu Ser Leu Thr Cys Thr Val Thr Asp Tyr Ser Ile Thr Ser Asp
20 25 30

Tyr Ala Trp Asn Trp Ile Arg Gln Phe Pro Gly Asn Lys Leu Glu Trp
35 40 45

Met Gly Tyr Ile Ser Tyr Ser Gly Ser Thr Ser Tyr Asn Pro Ser Leu
50 55 60

Lys Ser Arg Ile Ser Ile Thr Arg Asp Thr Ser Lys Asn Gln Phe Phe

Trp Leu Ala Leu Ile Tyr Trp Asn Asp Asp Lys Arg Tyr Ser Pro Ser
 50 55 60

Leu Lys Ser Arg Leu Thr Ile Thr Lys Asp Thr Ser Lys Asn Gln Val
 65 70 75 80

Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
 85 90 95

Cys Ala His Arg
 100

<210> 86
 <211> 98
 <212> PRT
 <213> Homo sapiens

<400> 86

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
 20 25 30

Trp Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45

Ala Asn Ile Lys Gln Asp Gly Ser Glu Lys Tyr Tyr Val Asp Ser Val
 50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
 65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Ala Arg

<210> 87
 <211> 98
 <212> PRT
 <213> Homo sapiens

<400> 87

Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gly
 1 5 10 15

Thr Leu Ser Leu Thr Cys Ala Val Ser Gly Gly Ser Ile Ser Ser Ser
 20 25 30

Asn Trp Trp Ser Trp Val Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp
 35 40 45

Ile Gly Glu Ile Tyr His Ser Gly Ser Thr Asn Tyr Asn Pro Ser Leu
 50 55 60

Lys Ser Arg Val Thr Ile Ser Val Asp Lys Ser Lys Asn Gln Phe Ser
 65 70 75 80

Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Ala Arg

<210> 88
 <211> 98
 <212> PRT
 <213> Homo sapiens

<400> 88

Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu
 1 5 10 15

Ser Leu Lys Ile Ser Cys Lys Gly Ser Gly Tyr Ser Phe Thr Ser Tyr
 20 25 30

Trp Ile Gly Trp Val Arg Gln Met Pro Gly Lys Gly Leu Glu Trp Met
 35 40 45

Gly Ile Ile Tyr Pro Gly Asp Ser Asp Thr Arg Tyr Ser Pro Ser Phe
 50 55 60

Gln Gly Gln Val Thr Ile Ser Ala Asp Lys Ser Ile Ser Thr Ala Tyr
 65 70 75 80

Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Met Tyr Tyr Cys
 85 90 95

Ala Arg

<210> 89
 <211> 101
 <212> PRT
 <213> Homo sapiens

<400> 89

Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
 1 5 10 15

Thr Leu Ser Leu Thr Cys Ala Ile Ser Gly Asp Ser Val Ser Ser Asn
 20 25 30

Ser Ala Ala Trp Asn Trp Ile Arg Gln Ser Pro Ser Arg Gly Leu Glu
 35 40 45

Trp Leu Gly Arg Thr Tyr Tyr Arg Ser Lys Trp Tyr Asn Asp Tyr Ala
 50 55 60

Val Ser Val Lys Ser Arg Ile Thr Ile Asn Pro Asp Thr Ser Lys Asn
 65 70 75 80

Gln Phe Ser Leu Gln Leu Asn Ser Val Thr Pro Glu Asp Thr Ala Val
 85 90 95

Tyr Tyr Cys Ala Arg
 100

<210> 90

<211> 98

<212> PRT

<213> Homo sapiens

<400> 90

Gln Val Gln Leu Val Gln Ser Gly Ser Glu Leu Lys Lys Pro Gly Ala
 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
 20 25 30

Ala Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45

Gly Trp Ile Asn Thr Asn Thr Gly Asn Pro Thr Tyr Ala Gln Gly Phe
 50 55 60

Thr Gly Arg Phe Val Phe Ser Leu Asp Thr Ser Val Ser Thr Ala Tyr
 65 70 75 80

Leu Gln Ile Cys Ser Leu Lys Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Ala Arg

<210> 91
<211> 58
<212> PRT
<213> Mus musculus

<400> 91

Asp Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
1 5 10 15

Ser Leu Ser Leu Thr Cys Thr Val Thr Asp Tyr Ser Ile Thr Ser Asp
20 25 30

Tyr Ala Trp Asn Trp Ile Arg Gln Phe Pro Gly Asn Lys Leu Glu Trp
35 40 45

Met Gly Tyr Ile Ser Tyr Ser Gly Ser Thr
50 55

<210> 92
<211> 59
<212> PRT
<213> Homo sapiens

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<223> Xaa= any amino acid

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<222> (33)..(33)
<223> Xaa= any amino acid

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<223> Xaa= any amino acid

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<223> Xaa= any amino acid

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<223> Xaa= any amino acid

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<222> (55)..(56)

<223> Xaa= any amino acid

<220>

<221> misc_feature

<222> (58)..(58)

<223> Xaa= any amino acid

<400> 92

Xaa Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Xaa
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Xaa Ser Tyr
20 25 30

Xaa Ile Xaa Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Xaa Ile Xaa Pro Tyr Xaa Xaa Gly Xaa Thr
50 55

<210> 93

<211> 62

<212> PRT

<213> Homo sapiens

<220>

<221> misc_feature

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<223> Xaa= any amino acid

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<222> (27)..(27)

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<222> (32)..(37)

<223> Xaa= any amino acid

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<221> misc_feature

<222> (52)..(52)

<223> Xaa= any amino acid

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<222> (58)..(59)
 <223> Xaa= any amino acid

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 <223> Xaa= any amino acid

<400> 93

Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
 1 5 10 15

Thr Leu Ser Leu Thr Cys Xaa Val Ser Gly Xaa Ser Xaa Ser Ser Xaa
 20 25 30

Xaa Xaa Xaa Xaa Xaa Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu
 35 40 45

Trp Ile Gly Xaa Ile Tyr Tyr Arg Ala Xaa Xaa Gly Xaa Thr
 50 55 60

<210> 94
 <211> 60
 <212> PRT
 <213> Homo sapiens

<220>
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<222> (58)..(59)

<223> Xaa= any amino acid

<400> 94

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Xaa Tyr
 20 25 30

Xaa Met Xaa Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45

Xaa Xaa Ile Xaa Xaa Lys Xaa Xaa Gly Xaa Xaa Thr
 50 55 60

<210> 95

<211> 58

<212> PRT

<213> Homo sapiens

<400> 95

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Gly Tyr
 20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45

Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr
 50 55

<210> 96

<211> 59

<212> PRT

<213> Homo sapiens

<400> 96

Gln Ile Thr Leu Lys Glu Ser Gly Pro Thr Leu Val Lys Pro Thr Gln
 1 5 10 15

Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe Ser Leu Ser Thr Ser
 20 25 30

Gly Val Gly Val Gly Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
 35 40 45

Trp Leu Ala Leu Ile Tyr Trp Asn Asp Asp Lys
50 55

<210> 97
<211> 58
<212> PRT
<213> Homo sapiens

<400> 97

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30

Trp Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ala Asn Ile Lys Gln Asp Gly Ser Glu Lys
50 55

<210> 98
<211> 58
<212> PRT
<213> Homo sapiens

<400> 98

Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gly
1 5 10 15

Thr Leu Ser Leu Thr Cys Ala Val Ser Gly Gly Ser Ile Ser Ser Ser
20 25 30

Asn Trp Trp Ser Trp Val Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp
35 40 45

Ile Gly Glu Ile Tyr His Ser Gly Ser Thr
50 55

<210> 99
<211> 58
<212> PRT
<213> Homo sapiens

<400> 99

Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu
1 5 10 15

Ser Leu Lys Ile Ser Cys Lys Gly Ser Gly Tyr Ser Phe Thr Ser Tyr
20 25 30

Trp Ile Gly Trp Val Arg Gln Met Pro Gly Lys Gly Leu Glu Trp Met
 35 40 45

Gly Ile Ile Tyr Pro Gly Asp Ser Asp Thr
 50 55

<210> 100
 <211> 61
 <212> PRT
 <213> Homo sapiens

<400> 100

Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
 1 5 10 15

Thr Leu Ser Leu Thr Cys Ala Ile Ser Gly Asp Ser Val Ser Ser Asn
 20 25 30

Ser Ala Ala Trp Asn Trp Ile Arg Gln Ser Pro Ser Arg Gly Leu Glu
 35 40 45

Trp Leu Gly Arg Thr Tyr Tyr Arg Ser Lys Trp Tyr Asn
 50 55 60

<210> 101
 <211> 58
 <212> PRT
 <213> Homo sapiens

<400> 101

Gln Val Gln Leu Val Gln Ser Gly Ser Glu Leu Lys Lys Pro Gly Ala
 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
 20 25 30

Ala Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45

Gly Trp Ile Asn Thr Asn Thr Gly Asn Pro
 50 55

<210> 102
 <211> 60
 <212> PRT
 <213> Mus musculus

<400> 102

Ser Tyr Asn Pro Ser Leu Lys Ser Arg Ile Ser Ile Thr Arg Asp Thr

1 5 10 15
 Ser Lys Asn Gln Phe Phe Leu Gln Leu Asn Ser Val Thr Thr Glu Asp
 20 25 30
 Thr Ala Thr Tyr Tyr Cys Ala Ser Phe Asp Tyr Ala His Ala Met Asp
 35 40 45
 Tyr Trp Gly Gln Gly Thr Ser Val Thr Val Ser Ser
 50 55 60

<210> 103
 <211> 70
 <212> PRT
 <213> Homo sapiens

<220>
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 <223> Xaa= any amino acid

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 <222> (41)..(53)
 <223> Xaa= any amino acid

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 <222> (55)..(56)
 <223> Xaa= any amino acid

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 <221> misc_feature
 <222> (59)..(59)
 <223> Xaa= any amino acid

<400> 103

Asn Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Ile Thr Xaa Asp Xaa
 1 5 10 15

Ser Thr Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Xaa Asp
 20 25 30

Thr Ala Val Tyr Tyr Cys Ala Arg Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 35 40 45

Xaa Xaa Xaa Xaa Xaa Asp Xaa Xaa Phe Asp Xaa Trp Gly Gln Gly Thr
 50 55 60

Leu Val Thr Val Ser Ser
 65 70

<210> 104
 <211> 70
 <212> PRT
 <213> Homo sapiens

<220>
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 <223> Xaa= any amino acid

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 <223> Xaa= any amino acid

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 <223> Xaa= any amino acid

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 <222> (59)..(59)
 <223> Xaa= any amino acid

<220>
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 <222> (65)..(65)
 <223> Xaa= any amino acid

<400> 104

Xaa Tyr Asn Pro Ser Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr
 1 5 10 15

Ser Lys Asn Gln Phe Ser Leu Xaa Leu Xaa Ser Val Thr Ala Ala Asp
 20 25 30

Thr Ala Val Tyr Tyr Cys Ala Arg Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 35 40 45

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Phe Asp Xaa Trp Gly Gln Gly Thr
 50 55 60

Xaa Val Thr Val Ser Ser
65 70

<210> 105
<211> 70
<212> PRT
<213> Homo sapiens

<220>
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<223> Xaa= any amino acid

<220>
<221> misc_feature
<222> (59)..(59)
<223> Xaa= any amino acid

<400> 105

Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn
1 5 10 15

Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp
20 25 30

Thr Ala Val Tyr Tyr Cys Ala Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
35 40 45

Xaa Xaa Xaa Xaa Tyr Tyr Xaa Xaa Phe Asp Xaa Trp Gly Gln Gly Thr
50 55 60

Leu Val Thr Val Ser Ser
65 70

<210> 106
<211> 70
<212> PRT
<213> Homo sapiens

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<221> misc_feature
<222> (41)..(55)
<223> Xaa= any amino acid

<400> 106

Asn Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Met Thr Arg Asp Thr
1 5 10 15

Ser Ile Ser Thr Ala Tyr Met Glu Leu Ser Arg Leu Arg Ser Asp Asp
 20 25 30

Thr Ala Val Tyr Tyr Cys Ala Arg Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 35 40 45

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Tyr Phe Asp Tyr Trp Gly Gln Gly Thr
 50 55 60

Leu Val Thr Val Ser Ser
 65 70

<210> 107
 <211> 70
 <212> PRT
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (42)..(55)
 <223> Xaa= any amino acid

<400> 107

Arg Tyr Ser Pro Ser Leu Lys Ser Arg Leu Thr Ile Thr Lys Asp Thr
 1 5 10 15

Ser Lys Asn Gln Val Val Leu Thr Met Thr Asn Met Asp Pro Val Asp
 20 25 30

Thr Ala Thr Tyr Tyr Cys Ala His Arg Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 35 40 45

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Tyr Phe Asp Tyr Trp Gly Gln Gly Thr
 50 55 60

Leu Val Thr Val Ser Ser
 65 70

<210> 108
 <211> 70
 <212> PRT
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (41)..(55)
 <223> Xaa= any amino acid

<400> 108

Tyr Tyr Val Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn

[illegible]

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<210> 109
<211> 70
<212> PRT
<213> Homo sapiens
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<220>
<221> misc_feature
<222> (41)..(55)
<223> Xaa= any amino acid
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<400> 109

Asn Tyr Asn Pro Ser Leu Lys Ser Arg Val Thr Ile Ser Val Asp Lys
1 5 10 15

Ser Lys Asn Gln Phe Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp
20 25 30

Thr Ala Val Tyr Tyr Cys Ala Arg Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
35 40 45

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Tyr Phe Asp Tyr Trp Gly Gln Gly Thr
50 55 60

Leu Val Thr Val Ser Ser
65 70

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<210> 110
<211> 70
<212> PRT
<213> Homo sapiens
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<220>
<221> misc_feature
<222> (41)..(55)
<223> Xaa= any amino acid
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<400> 110

Arg Tyr Ser Pro Ser Phe Gln Gly Gln Val Thr Ile Ser Ala Asp Lys
 1 5 10 15

Ser Ile Ser Thr Ala Tyr Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp
 20 25 30

Thr Ala Met Tyr Tyr Cys Ala Arg Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 35 40 45

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Tyr Phe Asp Tyr Trp Gly Gln Gly Thr
 50 55 60

Leu Val Thr Val Ser Ser
 65 70

<210> 111

<211> 70

<212> PRT

<213> Homo sapiens

<220>

<221> misc_feature

<222> (41)..(55)

<223> Xaa= any amino acid

<400> 111

Asp Tyr Ala Val Ser Val Lys Ser Arg Ile Thr Ile Asn Pro Asp Thr
 1 5 10 15

Ser Lys Asn Gln Phe Ser Leu Gln Leu Asn Ser Val Thr Pro Glu Asp
 20 25 30

Thr Ala Val Tyr Tyr Cys Ala Arg Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 35 40 45

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Tyr Phe Asp Tyr Trp Gly Gln Gly Thr
 50 55 60

Leu Val Thr Val Ser Ser
 65 70

<210> 112

<211> 70

<212> PRT

<213> Homo sapiens

<220>

<221> misc_feature

<222> (41)..(55)

<223> Xaa= any amino acid

<400> 112

Thr Tyr Ala Gln Gly Phe Thr Gly Arg Phe Val Phe Ser Leu Asp Thr
 1 5 10 15

Ser Val Ser Thr Ala Tyr Leu Gln Ile Cys Ser Leu Lys Ala Glu Asp
 20 25 30

Thr Ala Val Tyr Tyr Cys Ala Arg Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 35 40 45

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Tyr Phe Asp Tyr Trp Gly Gln Gly Thr
 50 55 60

Leu Val Thr Val Ser Ser
 65 70

<210> 113

<211> 1404

<212> DNA

<213> Homo sapiens

<400> 113

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 tgcactgtta ctgactactc tattacatcc gactacgctt ggaactggat ccgacaattt 180
 cctggtaaaa aactcgaatg gatgggttat atttcttact ctgggtccac ctccctacaat 240
 ccttctctga aatcacgcat cacaatttcc cgcgatacct ctaaaaatca attttcactc 300
 caactcaatt ctgttaccgc cgccgatact gccacctact actgtgcctc ttttgactac 360
 gctcacgcca tggattattg gggacagggg actaccgtta ccgtaagctc agccagcaca 420
 aagggcccat cggctcttccc cctggcaccc tcctccaaga gcacctctgg gggcacagcg 480
 gccctgggct gcctgggtcaa ggactacttc cccgaaccgg tgacgggtgtc gtggaactca 540
 ggcgcctga ccagcggcgt gcacaccttc ccggctgtcc tacagtcttc aggactctac 600
 tccctcagca gcgtggtgac cgtgccctcc agcagcttgg gcacccagac ctacatctgc 660
 aacgtgaatc acaagcccag caacaccaag gtggacaaga gagttgagcc caaatcttgt 720
 gacaaaactc acacatgtcc accgtgccca gcacctgaac tcctgggggg accgtcagtc 780
 ttctcttccc ccccaaaacc caaggacacc ctcatgatct cccggacccc tgaggtcaca 840
 tgcgtggtgg tggacgtgag ccacgaagac cctgaggtca agttcaactg gtacgtggac 900
 ggcgtggagg tgcataatgc caagacaaag ccgcggggagg agcagtacaa cagcacgtac 960

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cgtgtggtca gcgctctcac cgtcctgcac caggactggc tgaatggcaa ggagtacaag 1020
tgcaaggctct ccaacaaagc cctcccagcc cccatcgaga aaaccatctc caaagccaaa 1080
gggcagcccc gagaaccaca ggtgtacacc ctgcccccat cccgggagga gatgaccaag 1140
aaccagggtca gcctgacctg cctgggtcaaa ggcttctatc ccagcgacat cgccgtggag 1200
tgggagagca atgggcagcc ggagaacaac tacaagacca cgcctcccgt gctggactcc 1260
gacggctcct tcttctctta tagcaagctc accgtggaca agagcagggtg gcagcagggg 1320
aacgtcttct catgctccgt gatgcatgag gctctgcaca accactacac gcagaagagc 1380
ctctccctgt ccccggttaa atga 1404

```

```

<210> 114
<211> 467
<212> PRT
<213> Homo sapiens

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```

<400> 114

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```

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
1           5           10           15

```

```

Val His Ser Asp Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys
          20           25           30

```

```

Pro Ser Gln Thr Leu Ser Leu Thr Cys Thr Val Thr Asp Tyr Ser Ile
          35           40           45

```

```

Thr Ser Asp Tyr Ala Trp Asn Trp Ile Arg Gln Phe Pro Gly Lys Lys
          50           55           60

```

```

Leu Glu Trp Met Gly Tyr Ile Ser Tyr Ser Gly Ser Thr Ser Tyr Asn
65           70           75           80

```

```

Pro Ser Leu Lys Ser Arg Ile Thr Ile Ser Arg Asp Thr Ser Lys Asn
          85           90           95

```

```

Gln Phe Ser Leu Gln Leu Asn Ser Val Thr Ala Ala Asp Thr Ala Thr
          100           105           110

```

```

Tyr Tyr Cys Ala Ser Phe Asp Tyr Ala His Ala Met Asp Tyr Trp Gly
          115           120           125

```

```

Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser
          130           135           140

```

```

Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala
145           150           155           160

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Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val
 165 170 175

Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala
 180 185 190

Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val
 195 200 205

Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His
 210 215 220

Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Pro Lys Ser Cys
 225 230 235 240

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
 245 250 255

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
 260 265 270

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
 275 280 285

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
 290 295 300

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
 305 310 315 320

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
 325 330 335

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
 340 345 350

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
 355 360 365

Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
 370 375 380

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
 385 390 395 400

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
 405 410 415

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
 420 425 430

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
 435 440 445

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
 450 455 460

Pro Gly Lys
 465

<210> 115
 <211> 1404
 <212> DNA
 <213> Homo sapiens

<400> 115
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 tgcactgtat ccgattactc tattacttca gactacgctt ggaactggat cagacaattt 180
 cccggaaaag gactcgaatg gatgggatat atctcttact ctgggtcaac ctcttacaac 240
 ccctctctca aatctcgaat aacaatctca cgcgatactt ctaaaaatca attctcactt 300
 caacttaact ccgttactgc cgccgacact gccgtttact actgtgcttc cttcgattac 360
 gccacgcta tggattattg gggacaagga actaccgtca ctgtcagctc agccagcaca 420
 aagggcccat cggctcttccc cctggcacc cctccaaga gcacctctgg gggcacagcg 480
 gccctgggct gcctgggtcaa ggactacttc cccgaaccgg tgacgggtgtc gtggaactca 540
 ggcgcctga ccagcggcgt gcacaccttc ccggctgtcc tacagtcttc aggactctac 600
 tccctcagca gcgtgggtgac cgtgccctcc agcagcttgg gcaccagac ctacatctgc 660
 aacgtgaatc acaagcccag caacaccaag gtggacaaga gagttgagcc caaatcttgt 720
 gacaaaactc acacatgtcc accgtgccc gcacctgaac tcctgggggg accgtcagtc 780
 ttcctcttcc ccccaaaacc caaggacacc ctcatgatct cccggacccc tgaggtcaca 840
 tgcgtgggtgg tggacgtgag ccacgaagac cctgaggtca agttcaactg gtacgtggac 900
 ggcgtggagg tgcataatgc caagacaaag ccgcgggagg agcagtacaa cagcacgtac 960
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 aaccagggtca gcctgacctg cctgggtcaaa ggcttctatc ccagcgacat cgccgtggag 1200
 tgggagagca atgggcagcc ggagaacaac tacaagacca cgcctcccggt gctggactcc 1260

gacggctcct tcttctctta tagcaagctc accgtggaca agagcaggtg gcagcagggg 1320
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<210> 116
 <211> 467
 <212> PRT
 <213> Homo sapiens
 <400> 116

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
 1 5 10 15

Val His Ser Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys
 20 25 30

Pro Ser Gln Thr Leu Ser Leu Thr Cys Thr Val Ser Asp Tyr Ser Ile
 35 40 45

Thr Ser Asp Tyr Ala Trp Asn Trp Ile Arg Gln Phe Pro Gly Lys Gly
 50 55 60

Leu Glu Trp Met Gly Tyr Ile Ser Tyr Ser Gly Ser Thr Ser Tyr Asn
 65 70 75 80

Pro Ser Leu Lys Ser Arg Ile Thr Ile Ser Arg Asp Thr Ser Lys Asn
 85 90 95

Gln Phe Ser Leu Gln Leu Asn Ser Val Thr Ala Ala Asp Thr Ala Val
 100 105 110

Tyr Tyr Cys Ala Ser Phe Asp Tyr Ala His Ala Met Asp Tyr Trp Gly
 115 120 125

Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser
 130 135 140

Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala
 145 150 155 160

Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val
 165 170 175

Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala
 180 185 190

Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val

195	200	205
Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His		
210	215	220
Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Pro Lys Ser Cys		
225	230	235
Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly		
	245	250
Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met		
	260	265
Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His		
	275	280
Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val		
	290	295
His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr		
305	310	315
Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly		
	325	330
Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile		
	340	345
Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val		
	355	360
Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser		
	370	375
Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu		
385	390	395
Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro		
	405	410
Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val		
	420	425
Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met		
	435	440
		445

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
 450 455 460

Pro Gly Lys
 465

<210> 117
 <211> 2002
 <212> DNA
 <213> Homo sapiens

<400> 117
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 tgcactgtta ctgactactc tattacatcc gactacgctt ggaactggat ccgacaattt 180
 cctggtaaaa aactcgaatg gatgggttat atttcttact ctggctccac ctccctacaat 240
 ccttctctga aatcacgcat cacaatttcc cgcgatacct ctaaaaatca attttcactc 300
 caactcaatt ctgttacgcg cgccgatact gccacctact actgtgcctc ttttgactac 360
 gctcacgcca tggattattg gggacagggc actaccgtta ccgtaagctc agccagcaca 420
 aagggcccat ccgtcttccc cctggcgccc tgctccagga gcacctccga gagcacagcc 480
 gccctgggct gcctgggtcaa ggactacttc cccgaaccgg tgacgggtgtc gtggaactca 540
 ggcgccctga ccagcggcgt gcacaccttc ccggctgtcc tacagtccctc aggactctac 600
 tccctcagca gcgtgggtgac cgtgccctcc agcagcttgg gcacgaagac ctacacctgc 660
 aacgtagatc acaagcccag caacaccaag gtggacaaga gagttggtga gaggccagca 720
 cagggagggga ggggtgtctgc tgggaagccag gctcagccct cctgcctgga cgcaccccg 780
 ctgtgcagcc ccagcccagg gcagcaaggc atgccccatc tgtctcctca cccggaggcc 840
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 gcagccacag gctggatgcc cctaccccag gccctgcgca tacaggggca ggtgctgcgc 960
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 cagttcaact ggtacgtgga tggcgtggag gtgcataatg ccaagacaaa gccgcgggag 1440
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ctgaacggca aggagtacaa gtgcaaggtc tccaacaaag gcctcccgtc ctccatcgag 1560
 aaaaccatct ccaaagccaa aggtgggacc cacgggggtgc gagggccaca tggacagagg 1620
 tcagctcggc ccacctctg ccctgggagt gaccgctgtg ccaacctctg tccctacagg 1680
 gcagccccga gagccacagg tgtacaccct gcccccatcc caggaggaga tgaccaagaa 1740
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 ggagagcaat gggcagccgg agaacaacta caagaccacg cctcccgtgc tggactccga 1860
 cggctccttc ttcctctaca gcaggctaac cgtggacaag agcagggtggc aggaggggaa 1920
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 ctccctgtct ctgggtaaat ga 2002

<210> 118
 <211> 1395
 <212> DNA
 <213> Homo sapiens

<400> 118
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 tgcactgtta ctgactactc tattacatcc gactacgctt ggaactggat ccgacaattt 180
 cctggtaaaa aactcgaatg gatgggttat atttcttact ctggctccac ctccctacaat 240
 ccttctctga aatcacgcat cacaatttcc cgcgatacct ctaaaaatca attttctactc 300
 caactcaatt ctgttaccgc cgccgatact gccacctact actgtgcctc ttttgactac 360
 gctcacgcca tggattattg gggacagggc actaccgtta ccgtaagctc agccagcaca 420
 aagggcccat ccgtcttccc cctggcgccc tgctccagga gcacctccga gagcacagcc 480
 gccctgggct gcctggtcaa ggactacttc cccgaaccgg tgacgggtgc gtggaactca 540
 ggcgcctga ccagcggcgt gcacaccttc ccggctgtcc tacagtcctc aggactctac 600
 tccctcagca gcgtggtgac cgtgccctcc agcagcttgg gcacgaagac ctacacctgc 660
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 ccccatgcc catcatgcc agcacctgag ttcttggggg gaccatcagt ctctctgttc 780
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 cgagagccac aggtgtacac cctgccccca tcccaggagg agatgaccaa gaaccaggtc 1140

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ttcttcctct acagcaggct aaccgtggac aagagcaggt ggcaggaggg gaatgtcttc 1320
tcatgctccg tgatgcatga ggctctgcac aaccactaca cacagaagag cctctccctg 1380
tctctgggta aatga 1395

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<210> 119
 <211> 464
 <212> PRT
 <213> Homo sapiens

<400> 119

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Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
1           5           10           15

```

```

Val His Ser Asp Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys
          20           25           30

```

```

Pro Ser Gln Thr Leu Ser Leu Thr Cys Thr Val Thr Asp Tyr Ser Ile
          35           40           45

```

```

Thr Ser Asp Tyr Ala Trp Asn Trp Ile Arg Gln Phe Pro Gly Lys Lys
          50           55           60

```

```

Leu Glu Trp Met Gly Tyr Ile Ser Tyr Ser Gly Ser Thr Ser Tyr Asn
65           70           75           80

```

```

Pro Ser Leu Lys Ser Arg Ile Thr Ile Ser Arg Asp Thr Ser Lys Asn
          85           90           95

```

```

Gln Phe Ser Leu Gln Leu Asn Ser Val Thr Ala Ala Asp Thr Ala Thr
          100           105           110

```

```

Tyr Tyr Cys Ala Ser Phe Asp Tyr Ala His Ala Met Asp Tyr Trp Gly
          115           120           125

```

```

Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser
          130           135           140

```

```

Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala
145           150           155           160

```

```

Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val
          165           170           175

```

```

Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala

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180	185	190
Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val		
195	200	205
Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His		
210	215	220
Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly		
225	230	235
Pro Pro Cys Pro Ser Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser		
245	250	255
Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg		
260	265	270
Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro		
275	280	285
Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala		
290	295	300
Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val		
305	310	315
Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr		
325	330	335
Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr		
340	345	350
Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu		
355	360	365
Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys		
370	375	380
Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser		
385	390	395
Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp		
405	410	415
Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser		
420	425	430

Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala
435 440 445

Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
450 455 460

<210> 120
<211> 8
<212> PRT
<213> Homo sapiens

<400> 120

Arg Phe Arg Asp Asn Thr Pro Asn
1 5

<210> 121
<211> 8
<212> PRT
<213> Homo sapiens

<400> 121

Arg Phe Arg Asp Asn Thr Ala Asn
1 5

<210> 122
<211> 9
<212> PRT
<213> Homo sapiens

<400> 122

Ile Thr Phe Glu Phe Val Asp Gln Glu
1 5

<210> 123
<211> 7
<212> PRT
<213> Homo sapiens

<400> 123

Phe Tyr Glu Thr Pro Leu Gln
1 5

<210> 124
<211> 118
<212> PRT
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)..(1)
<223> Xaa= any amino acid

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Tyr Ala Trp Asn Trp Ile Xaa Gln Xaa Xaa Xaa Xaa Xaa Leu Xaa Trp
 35 40 45

Met Gly Tyr Ile Ser Tyr Ser Gly Ser Thr Ser Xaa Asn Xaa Xaa Leu
 50 55 60

Xaa Xaa Xaa Ile Xaa Ile Xaa Arg Xaa Xaa Xaa Xaa Xaa Xaa Phe Xaa
 65 70 75 80

Leu Xaa Leu Xaa Xaa Val Xaa Xaa Xaa Asp Xaa Ala Xaa Tyr Tyr Cys
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Tyr Ala Trp Asn Trp Ile Arg Gln Xaa Pro Xaa Xaa Lys Leu Glu Trp

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Met Gly Tyr Ile Ser Tyr Ser Gly Ser Thr Ser Tyr Asn Pro Ser Leu
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Lys Xaa Arg Ile Xaa Ile Xaa Arg Xaa Thr Xaa Xaa Asn Xaa Phe Xaa
 65 70 75 80

Leu Xaa Leu Xaa Xaa Val Xaa Xaa Xaa Asp Xaa Ala Thr Tyr Tyr Cys
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 35 40 45

Met Gly Tyr Ile Ser Tyr Ser Gly Ser Thr Ser Tyr Asn Pro Ser Leu
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Lys Ser Arg Ile Xaa Ile Xaa Arg Asp Thr Ser Lys Asn Gln Phe Xaa
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Leu Gln Leu Asn Ser Val Thr Xaa Xaa Asp Thr Ala Xaa Tyr Tyr Cys
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Tyr Ala Trp Asn Trp Ile Arg Gln Phe Pro Gly Xaa Lys Leu Glu Trp
35 40 45

Met Gly Tyr Ile Ser Tyr Ser Gly Ser Thr Ser Tyr Asn Pro Ser Leu
50 55 60

Lys Ser Arg Ile Xaa Ile Xaa Arg Asp Thr Ser Lys Asn Gln Phe Xaa
65 70 75 80

Leu Gln Leu Asn Ser Val Thr Xaa Xaa Asp Thr Ala Thr Tyr Tyr Cys
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Ile His Trp Tyr Xaa Gln Xaa Xaa Xaa Xaa Xaa Pro Xaa Leu Leu Ile
35 40 45

Lys Tyr Ala Ser Glu Xaa Xaa Xaa Xaa Ile Xaa Xaa Xaa Phe Xaa Gly
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Xaa Gly Xaa Gly Xaa Xaa Phe Xaa Leu Xaa Ile Xaa Xaa Val Xaa Xaa
65 70 75 80

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Thr Phe Gly Xaa Gly Thr Xaa Leu Xaa Xaa Xaa Xaa Xaa
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 20 25 30

Ile His Trp Tyr Gln Gln Xaa Thr Xaa Xaa Ser Pro Arg Leu Leu Ile
 35 40 45

Lys Tyr Ala Ser Glu Xaa Ile Ser Xaa Ile Pro Xaa Arg Phe Xaa Gly
 50 55 60

Xaa Gly Xaa Gly Xaa Xaa Phe Xaa Leu Xaa Ile Xaa Xaa Val Xaa Xaa
 65 70 75 80

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Ile His Trp Tyr Gln Gln Xaa Thr Xaa Xaa Xaa Pro Arg Leu Leu Ile
35 40 45

Lys Tyr Ala Ser Glu Xaa Xaa Xaa Gly Ile Pro Xaa Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Xaa Ile Xaa Xaa Val Glu Ser
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Ile His Trp Tyr Gln Gln Xaa Thr Xaa Xaa Ser Pro Arg Leu Leu Ile
35 40 45

Lys Tyr Ala Ser Glu Xaa Ile Ser Gly Ile Pro Xaa Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Xaa Ile Xaa Xaa Val Glu Ser
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 35 40 45

Lys Tyr Ala Ser Glu Ser Ile Ser Gly Ile Pro Xaa Arg Phe Ser Gly
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Ser Gly Ser Gly Thr Asp Phe Thr Leu Xaa Ile Xaa Xaa Val Glu Ser
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Tyr Ala Trp Asn Trp Ile Xaa Gln Xaa Xaa Xaa Xaa Xaa Leu Xaa Trp
35 40 45

Met Gly Tyr Ile Ser Tyr Ser Gly Ser Thr Ser Xaa Asn Xaa Xaa Leu
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Leu Xaa Leu Xaa Xaa Val Xaa Xaa Xaa Asp Xaa Ala Xaa Tyr Tyr Cys
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20 25 30

Ile His Trp Tyr Xaa Gln Xaa Xaa Xaa Xaa Xaa Pro Xaa Leu Leu Ile
35 40 45

Lys Tyr Ala Ser Glu Xaa Xaa Xaa Xaa Ile Xaa Xaa Xaa Phe Xaa Gly
50 55 60

Xaa Gly Xaa Gly Xaa Xaa Phe Xaa Leu Xaa Ile Xaa Xaa Val Xaa Xaa
65 70 75 80

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Ile His Trp Tyr Gln Gln Lys Thr Gly Gln Ser Pro Arg Leu Leu Ile
 35 40 45

Lys Tyr Ala Ser Glu Ser Ile Ser Gly Ile Pro Asp Arg Phe Ser Gly
 50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Val Glu Ser
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Glu Asp Phe Ala Asp Tyr Tyr Cys Gln Gln Ile Asn Ser Trp Pro Thr
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